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## *DREAMS*

The North Dakota Department of Health (NDDoH) Division of Disease Control currently is developing and implementing the Disease Reporting, Epidemiological Assessment and Monitoring System, also known as DREAMS. The DREAMS project will enhance disease surveillance programs by providing real-time reporting of conditions, more efficient case management and increased data applications.

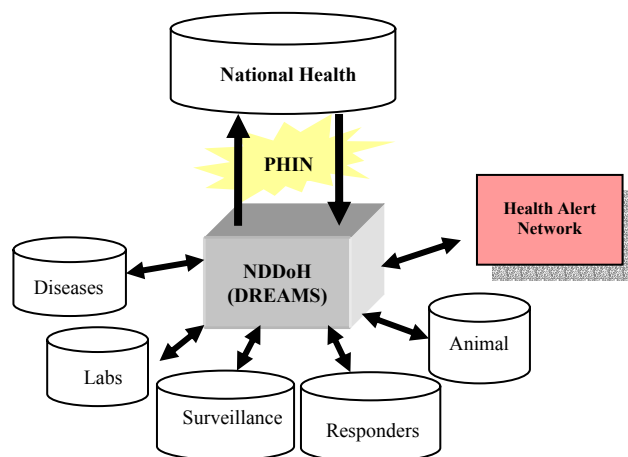
The DREAMS project is comparable to the Centers for Disease Control and Prevention (CDC) National Electronic Disease Surveillance System (NEDSS) and will be fully integrated with that system. Using Health Language version 7, or HL7 format, laboratory results will electronically be submitted to the system. Phase I of the DREAMS project will include implementing the web-based disease reporting system for providers and integrating with the Division of Microbiology to receive laboratory reports electronically. Phase I is expected to be functional by Jan. 1, 2004. Phase II will involve integrating with private laboratories in Bismarck, Jamestown, Fargo, Grand Forks, Devils Lake, Minot, Williston and Dickinson. Other enhancements, such as geographic information modeling, also will be included. The Phase II project is expected to be completed by May 31, 2004.

Health-care providers and facilities will be able to report cases, produce reports and review laboratory results for samples submitted to the Division of Microbiology by that facility.

Disease reporting is just one of the components of the DREAMS project. Several other data sources are currently being integrated with the DREAMS project (Figure 1). These include animal-health disease and laboratory reporting, emergency response/ambulance runs and syndromic surveillance. Through the Public Health Information Network (PHIN), this data will be able to flow

from the NDDoH to national health organizations such as the CDC. The DREAMS project also will be integrated with the Health Alert Network (HAN) to receive and send health alert information.

**Figure 1. Data sources incorporated with DREAMS.**



### Influenza Season Sentinel Providers

The North Dakota Department of Health would like to thank the 18 health-care providers participating in the influenza sentinel providers program. These 18 providers will conduct surveillance for influenza-like illness (ILI) this flu season. Providers of all specialties (e.g., family physicians, internists, pediatricians, physician assistants, nurse practitioners, registered nurses) in a variety of practices (e.g., private practice, public health clinic, urgent care center, emergency room, student health center) will be reporting weekly to the NDDoH the number of patients seen for ILI, along with their total number of patients seen.

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Publication also appears on the department's home page at <http://www.health.state.nd.us>

EQUAL OPPORTUNITY EMPLOYER.

Locations of the 18 sentinel providers who have volunteered to conduct influenza surveillance during the 2003-2004 influenza season are shown in Figure 2 on p. 4.

Influenza is a major cause of illness and death in the United States. The CDC estimates that 114,000 hospitalizations and 36,000 influenza-related deaths occur each year.

Epidemics of influenza generally occur during the winter months and peak anywhere from late December through March.

In North Dakota, nearly 500 deaths were attributed to influenza and/or pneumonia during the 2002-2003 influenza season.

For more information, contact Melissa Casteel, influenza surveillance coordinator, at 800.472.2180 or [mcasteel@state.nd.us](mailto:mcasteel@state.nd.us).

#### **Did you know?**

North Dakota-specific information on influenza surveillance is available at [www.ndflu.com](http://www.ndflu.com).

### **Meet the New Field Epi**



**Name:** Matt Werpy

**Health Unit:** Grand Forks Public Health

**Years with the department:** 1 month

**Education background:** B.S. in biotechnology with a minor in chemistry from North Dakota State University

**Hobbies/family/and other interesting information:** “I like the outdoors and spend much of my free time hunting and fishing. I am the middle child in a family of three boys.”

**Interesting cases/investigations:** “The most interesting case I have been involved with in my short time here is the recent *E. coli* O157:H7 outbreak in Grand Forks.”

Matt’s role as a field epidemiologist is an integral part in conducting investigation of disease outbreaks and disease intervention, performing infectious and communicable disease surveillance and providing community health education.

A fond farewell goes out to Del Streitz, who worked for the North Dakota Department of Health in Disease Control for over 26 years. We wish Del the best in his future endeavors as the emergency response and preparedness coordinator for Grand Forks Public Health.

### **E. coli O157:H7 Outbreak in Grand Forks, ND**

The North Dakota Department of Health (NDDoH) was notified in mid-October of four *E. coli* O157:H7 cases that sought medical care all within the same time period. Follow-up revealed two of the patients dined at a seafood restaurant in Grand Forks on September 30, 2003, while the other two ate at the restaurant on October 1, 2003.

Disease control epidemiologists coordinated an investigation and interviewed other patients presenting with similar symptoms at the emergency room and anyone likely to have eaten at the restaurant around the first week of October. A total of 127 people were interviewed, and 14 met the case definition of having diarrhea two to 10 days after eating at the restaurant. The onset date of diarrhea ranged from October 3 to October 6. The median onset date was October 4 and the average incubation time was 91 hours (3-4 days).

The *E. coli* strains isolated from the four patients had the same DNA fingerprint suggesting that these four patients became ill from the same source. They also were linked epidemiologically to eating at the same restaurant. However, food samples submitted by the restaurant for testing and stool samples submitted by symptomatic restaurant staff were negative for *E. coli*. Samples have been sent to the CDC for additional testing. The investigation is still pending.

### **Epidemiology in Action Course**

Epidemiology in Action, a nine and one-half day course in basic epidemiology directed by Dr. Philip Brachman of Emory University, will be held in Bismarck December 2 through 12, 2003.

#### **Contributing Authors:**

Melissa Casteel, influenza surveillance coordinator  
Erin Fox, surveillance epidemiologist  
Julie Goplin, surveillance epidemiologist

#### **Did you know??**

Health-care providers now can send disease report cards to the NDDoH via the internet at [www.health.state.nd.us/disease/DiseaseCard.htm](http://www.health.state.nd.us/disease/DiseaseCard.htm). Call Erin Fox at 701.328.3341 or Julie Goplin at 701.328.2375 if you have any questions about the new system. The NDDoH still accepts alternative reporting methods such as paper report card, fax, etc.

Summary of Selected Reportable Conditions					
North Dakota, 2002-2003					
Reportable Condition	September -October 2003*	January- October 2003*		September -October 2002	January- October 2002
Campylobacteriosis	4	66		21	77
Chlamydia	310	1410		207	1060
Cryptosporidiosis	1	12		11	38
<i>E. coli</i> , shiga toxin positive (non-O157)	1	9		1	3
<i>E. coli</i> O157:H7	5	8		3	19
Enterococcus, Vancomycin-resistant (VRE)	1	10		0	0
Giardiasis	6	36		10	41
Gonorrhea	29	86		13	65
Haemophilus influenzae (invasive)	2	4		0	6
Hepatitis A	0	1		0	3
Hepatitis B	0	2		0	6
HIV/AIDS	2	18		3	19
Legionellosis	0	1		0	1
Lyme Disease	0	0		0	1
Malaria <sup>1</sup>	0	1		0	1
Meningitis, bacterial <sup>2</sup> (non meningococcal)	1	5		0	1
Meningococcal disease	0	3		1	4
Pertussis	3	7		2	9
Q fever	0	1		0	0
Rabies (animal)	6	53		7	49
Salmonellosis	5	36		13	50
Shigellosis	0	6		1	21
<i>Staphylococcus aureus</i> , Methicillin-resistant (MRSA) <sup>3,4</sup>	110	949		163	349
Streptococcal disease, Group A <sup>5</sup> (invasive)	2	15		0	3
Streptococcal disease, Group B <sup>5</sup> (infant < 3 months of age)	1	3		0	2
Streptococcal disease, Group B <sup>5</sup> (invasive <sup>6</sup> )	5	25		2	8
Streptococcal disease, other <sup>5,7</sup> (invasive)	1	5		0	0
Streptococcal pneumoniae <sup>5</sup> , (invasive, children < 5 years of age)	0	7		0	3
Streptococcal pneumoniae <sup>5</sup> (invasive <sup>8</sup> )	8	43		3	29
<i>Streptococcus pneumoniae</i> <sup>5</sup> , drug resistant	0	3		0	1
Tuberculosis	2	4		0	6
West Nile Virus Infection <sup>9</sup>	488	616		7	7

\*Provisional data

<sup>1</sup> *Plasmodium falciparum*, foreign travel

<sup>2</sup> Meningitis caused by *Staphylococcus aureus* and *Streptococcus pneumoniae*.

<sup>3</sup> 2003 year-to-date data includes MRSA isolated from all sites.

<sup>4</sup> 2002 year-to-date data includes invasive sites only prior to August 1.

<sup>5</sup> Includes invasive infections caused by streptococcal disease not including those classified as meningitis.

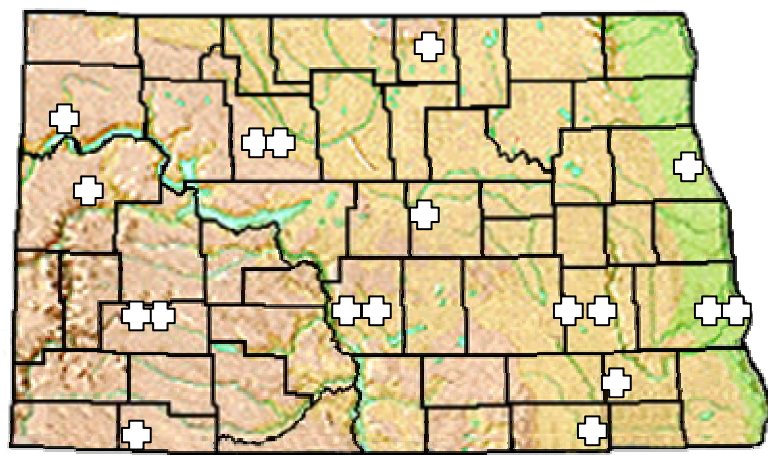
<sup>6</sup> Includes invasive infections of streptococcal, Group B, disease in persons  $\geq$  3 months of age.

<sup>7</sup> Group G (3); serotype unknown (1)

<sup>8</sup> Includes invasive infections caused by *Streptococcus pneumoniae* in persons  $\geq$  5 years of age.

<sup>9</sup> West Nile Virus Encephalitis year-to-date 2003 (79); 2002 (2)

**Figure 2. North Dakota 2003-2004  
Influenza Season Sentinel Providers**



Provider	Practice Name	City
Michael Boulter	Mercy Medical Center	Williston
Wayne Breitwieser	Altru Health System	Grand Forks
James Buhr	Meritcare Clinic	Valley City
Pat Egeberg	VCSU Student Health	Valley City
Napoleon Espejo	Family Health Care	Fargo
Laura Fuerstenburg	U of Mary Student Health	Bismarck
Steven Glunburg	NDSU Student Health	Fargo
Sai Haranath	Southeast Medical Center	Oakes
John Joyce	West River Regional	Hettinger
Kimberly Krohn	Center for Family Medicine	Minot
Robert McDonald	UND Family Practice Center	Bismarck
R.J. Moen	McKenzie County Clinic	Watford City
Charles Nyhus	Central Dakota Clinic	Harvey
Sandeep Patel	Quentin Burdick	Belcourt
Kari Sikkink	Ransom County Clinic	Lisbon
Thomas Templeton	Great Plains Clinic	Dickinson
David Walsh	Minot VA CBOC	Minot
Terry Wolf	Dickinson Clinic	Dickinson